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AUTHOR Adler, Jay C.; And Others
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ABSTRACT

Incentive programs in the form of token economies (the granting of points or counters which can later be exchanged for tangible rewards such as free time, listening to records, or candy) are widely used in schools today. The Pizza Hut restaurant chain promotes a motivation plan called "Book It" with free pizza as the reward for increased free reading, in cooperation with interested school systems. Such a program was mounted in a western suburban Chicago school district with 245 sixth grade students over a 5-month period. Students in the experimental group were promised a pizza reward for achieving an appropriate reading goal; students in the control group were simply encouraged to read as much as possible. Scores on the Gates-MacGinitie Reading Achievement Test was the dependent variable. Contrary to enthusiastic expectations by the promoters of the "Book It" program, there were no statistically significant differences between the experimental group and the control group on reading achievement scores, although the participants probably derived some social benefits from the experience. Token economies have been successful with many forms of adolescent behavior, but these results underscore the belief that reading is too complex a process to be affected by just one variable--an external incentive. (Author/NKA)

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ABSTRACT

A Middle School Experiment: Can A Token Economy Improve Reading Achievement Scores?

Jay C. Adler
Jan Winek
Cary (Illinois) Middle School

Richard J. Mueller
Northern Illinois University

Incentive programs in the form of token economies are widely used in schools today. The Pizza Hut Restaurant chain promotes a motivation plan--"Book It"--with free pizza as the reward for increased free reading, in cooperation with interested school systems. Two teachers in a Chicago, western suburban school district mounted the program with 245 students over a 5-month period. Experimentals were promised a pizza reward for achieving an appropriate reading goal; controls were simply encouraged to read as much as possible. Scores on the Gates-MacGinitie Reading Achievement test was the dependent variable. Contrary to enthusiastic expectations by the promoters of the "Book It" program, there were no statistically significant differences between the experimentals and controls on reading achievement scores, although the participants probably derived some social benefits from the experience. Token economies have been successful with many forms of adolescent behavior, but the results of this study underscore the belief that reading is too complex a process to be affected by just one variable--an external incentive.

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A Middle School Experiment: Can a Token Economy Improve Reading Achievement Scores?

Introduction

Token economies (TE)--the granting of points or counters which can later be exchanged for tangible rewards such as free time, listening to records, or candy--is a common practice in today's schools (Flax, 1988). The earliest application of this version of behavior modification occurred in the field of clinical psychology; however, in the late 60's and early 70's, it surfaced in education (Glas & Resnick, 1972). The logical extension of TE on a large scale occurred in the late 1980's with the use of money as the reward for school attendance, good behavior, and completed homework (Flax, 1988; Anderson, 1967; Biembrauler & Lawler, 1964; Leary & Becker, 1967).

Specific applications included the use of token rewards for appropriate classroom behavior (Kazdin, 1973), increased accuracy in academic areas (Markoalin, McInnis & Heads, 1974), improved beginning reading skills (Staats, et al., 1964), and increased scores on Figural Form A of the *Torrance Tests of Creative Thinking* (Johnson, 1974). Another study noted that schoolwork, personal habits, swearing, and neatness were changed effectively (Phillips, 1968). Staats found in his study (mentioned above) that exclusive use of social reinforcers resulted in students achieving an important objective of the technique--students no longer needing to remain in the program.

Noting that token economies had been successful in various other applications, Pizza Hut restaurants initiated a reading incentive program called "Book It," which is now in its fourth year. The program offers free pizza as the incentive for students who complete the requirements. Promotional literature from Pizza Hut states that as of 1988, 70 million pizza certificates were distributed in 450,000 classrooms for a total of 14 million participants--over one-half of the elementary school population of the U.S. According to a survey conducted by the University of Rhode Island in 1986, 69% of the students who participated in the program "improved their reading level", in addition to attitudinal improvement. However, there appears to be no evidence that the "Book It" system can improve reading achievement test scores.

The purpose of this study was to determine if a large and prominent food chain's offer of free pizza will improve the reading achievement scores of middle school participants. Is pizza, a popular "pig-out" food, a powerful motivator for reading?

It was predicted that reading achievement as measured by a standard achievement test will show an increase greater than normal maturational gains over the five month duration of the study. The rationale for this hypothesis is the great weight of evidence cited above for the effectiveness of token reward systems with various kinds of behavior.

Method: Subjects

The subjects were approximately 245 students from two elementary

school districts in a Chicago suburban area. The groups were designated as high or medium level reading groups based on teacher recommendations and SRA percentile scores.

Materials:

All materials were from the "Book It" program, school and community libraries, parents, and teacher-developed materials, including a letter to parents, reading verification form, free pizza certificates, and promotional materials. Books read during the program were obtained from school or local libraries or provided by parents. The teachers sent a cover letter to the parents that explained the school's role and a *Book Talk Sheet*.

Procedure

All five groups of 6th graders were required to read a book of their choice from eight to twelve minutes a day, five days a week. No magazines, comic books, or textbooks were allowed. When a week was shorter than five days or when circumstances did not allow reading at a given time, the time on succeeding days was increased so that forty minutes a week was "free reading" time. To earn a certificate for a free pizza, the average grouping had to read 250 pages, while the high groups had to read 300 pages per month. After each book or required number of pages was completed, each child was required to fill out a *Book Talk Sheet* and give the teacher a short summary of the book. At the completion of the month's reading requirement, the student received one free pizza certificate redeemable at a local Pizza Hut restaurant. The program covered a five-month period.

If the student read the required number of pages each month for five of the six months, he/she received a certificate of accomplishment signed by the principal.

If the class completed the class requirements for five of the six months, they earned a class pizza party at no cost.

Design of the Study

The design used was pretest-posttest equivalent-group. The independent variable was the "Book It" program, and the dependent variable was the test scores from the *Gates-MacGinitie Reading Test, 2nd Edition, Forms 1 and 2.* Form 1 was used for the pretest and Form 2 for the posttest.

Results

Statistical analysis of the test scores failed to reveal any statistically significant improvement of experimental subjects over the controls. There was no statistically significance difference between the groups at the beginning of the "Book it" experiment. Both groups showed a small growth gain over the duration of the experiment, which is consistent with the expected maturational improvement on a standardized reading test.

Discussion

The fact that the "Book It" program did not significantly raise standardized test scores is consistent with research findings on the nature of reading achievement. Is reading a process that reacts to the manipulation of just one variable, in this case, the incentive of

free pizza? It is reasonable to conclude that the experimental subjects felt some additional enthusiasm for reading and perhaps derived some social benefits from anticipation of a trip to the Pizza Hut to collect their reward. However, real improvement in reading achievement is a complex process probably most reactive to direct instruction, of which there are many, current models (Pintrich, et al, 1986). But the authors do not denigrate the "Book It" plan. Any motivational efforts aimed at reading should be applauded. Nevertheless, the results of this study do not support the rather effusive claims of the "Book It" people that the incentive of a free pizza will result in clear gains in reading achievement test scores.

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